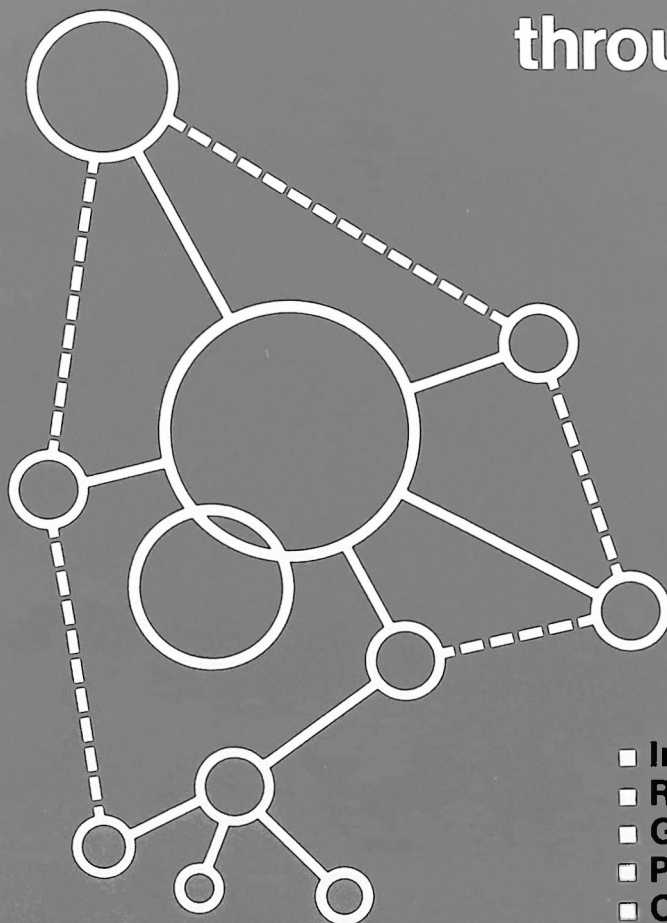




AUGMENTATION RESEARCH CENTER
STANFORD RESEARCH INSTITUTE

Introduction to Document Production through NLS



- Input
- Revision
- Graphics
- Printing
- Control
- Development



1

Introduction

This brochure presents an innovative new system for document production and control. A single computer-based system, the *Document System*, governs the entire document preparation process, from creation of text and graphics, through revision and editing, to final printing and cataloging. This uniform approach has great potential for reducing key strokes and costs, improving accuracy and quality, and simplifying accounting and control. It is of interest to most organizations that regularly produce reports or other publications.

2

An Evolving Technology

The Document System is a stable system used profitably today by a number of organizations. It is also part of an effort to bring new technological solutions to specific publications problems. In addition to maintaining and supporting present system capabilities, SRI participates with the community of users of the Document System in developing, implementing, and disseminating a steady stream of new capabilities or "tools" that enhance the usefulness of the Document System for the entire community. Therefore, a user of the Document System gains continuing, up-to-date access to state-of-the-art technology. We will portray the Document System in terms of both the existing tools and the evolving developments.

3

Broad Capabilities

"Word Processing" refers to a rapidly growing collection of computer-based text handling tools. Such systems are normally restricted to one type of publication, or to certain steps in the publication process, and do not connect readily to other computer tools. Allied development of isolated systems is going on in newspaper and commercial publications. The Document System users, however, are able to work in a range of environments. They are experienced with many ways to enter text, highly flexible editing and formatting, a variety of output media, publication management aids, and connection to other systems.

To learn more about the Document System and the Workshop Utility Service, please get in touch with:

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4 Text Creation Tools

Text can be entered into the Document System directly at teletype or display terminals, from magnetic media created at stand-alone terminals, by transferring files from other computer systems, or by using scanning devices such as Optical Character Readers.

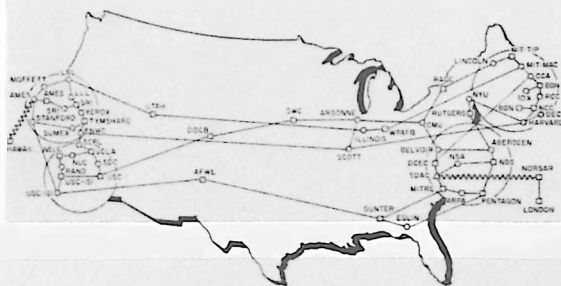
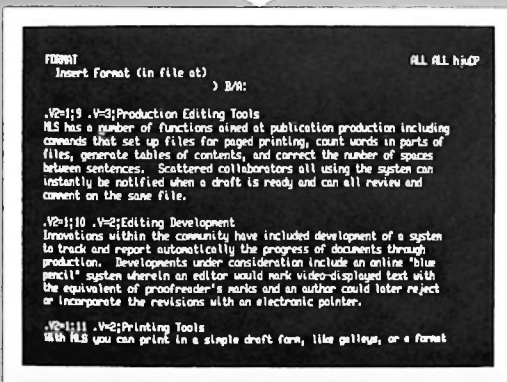


5 Development in Text Creation

Developments within the user community have already created paths from some other file formats to the Document System, and a system has been built to translate information typed on MTST cartridges into Document System files. The user community is also interested in extending the range of editing commands in today's system.

6 Revision Tools

All Document System text files are automatically organized in outline form. Commands allow the user to reorganize entire paragraphs or chapters of the document as easily as conventional word processing systems can move, copy, or replace single words. This facility is particularly useful to initially write and organize material. Except for privacy restrictions, these commands can reach, search, and extract material from any file in the system, a library of sources with the capacity of thousands of books.



7 Production Editing Tools

The Document System has a number of features that simplify publication production, including commands that set up files for paged printing, count words in parts of documents, generate tables of contents, and correct the number of spaces between sentences. Scattered collaborators all using the system can instantly be notified when a draft is ready and can all review and comment on the same version of the draft.

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9 Printing Tools

With the Document System you can print in a simple draft form, like galleys, or a format with headers, footers, control of top and side margins, etc. You may print with typewriter fonts on a local printer or photocompose documents with a variety of type sizes, fonts, and columnation. You may quickly proof photocomposed pages with approximate fonts and type sizes on graphic display terminals. Coded directives, visible for editing but not printed, control page layout. Automatic aids are often used to insert formatting, but users with special training control formatting themselves. The type of this brochure was set in the Document System, except the cover pages.

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8 Editing Development

Innovations within the community have included development of a system to track and report automatically the progress of documents through production. Developments under consideration include an online "blue pencil" system, wherein an editor would mark video-displayed text with the equivalent of proofreader's marks and an author could later reject or incorporate the revisions with an electronic pointer.

10 Printing Development

Some members of the user community who must conform to rigid formats have already made or commissioned automatic formatters for their documents. Output to a raster printer, to provide proportional spacing, change of typefaces, and inexpensive portrayal of line drawings, is under consideration.

11 Graphics

A Graphics subsystem allows you to draw and edit simple illustrations, e.g., organization flow charts, as part of documents. Graphics may be transferred from other computer systems into the Document System. On fine-resolution screens you can view and edit such drawings, and you can print them through appropriate printers. In the case of halftones and complex line drawings, the user must set aside white space in the manner usual in photo-offset printing.

13 Control Tools

Automatic cataloging within Document System provides a medium for freezing, cataloging, and identifying documents, and recording their standing with respect to updates. The Document System records the date, time, and name of the person who made the last change in any paragraph.

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12 Graphics Development

The Graphics subsystem was first used in the summer of 1975. As with any new system, a variety of extensions and revisions have been proposed. They include raster video terminals which offer a range of resolution appropriate to the needs of different users and raster printers for inexpensive printouts.

14 Control Tools Development

A subsystem has been written to track and report the status of all jobs in a publications process within one user organization. We can imagine inexpensively creating a system that would allow a publications specialist to replace a paragraph in a document, and then would print out the corrected page or pages along with mailing labels for the distribution list. At the same time, the new status of the document would be recorded in the distribution log and catalogs.

15 Publications Management

Accounting programs are available that could be combined with control mechanisms to keep a constant check on the cost, workload, and schedule status of a job or working group.

(Continued on back page)

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Knowledge Work

Knowledge Workers are people in corporate, government, professional, or academic careers who create, look up, or rearrange information to do their jobs. Their role in our society is large and expanding. Many specialized computer tools such as library retrieval systems, management information systems, and criminal information systems help with pieces of knowledge work. Such systems are frequently useful in their place for their immediate purpose, but tend to confuse outsiders and fail to communicate with other users or other computer systems. The Augmentation Research Center at SRI (ARC) has been working for over 14 years to develop a coherent set of computer-based tools useful in all types of knowledge work. We call this set the *Online System (NLS)*. Document System is actually a portion of NLS tailored to the needs of those knowledge workers who are primarily concerned with documentation.

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Workshop Utility Service

NLS service comes to most users through a subscription to a Knowledge Workshop Utility. Subscribers pay a flat rate for a share of computing power and information storage, along with support service including training, application consulting, documentation, programming support and operator services. More than 15 organizations currently subscribe to this service. From each organization, a key person, called an Architect, plans the use of NLS in his or her environment. Architects communicate with each other through NLS and meet periodically. Arrangements can also be made for limited Utility service, when the subscriber is only interested in a single application such as Document System.

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User Community

NLS is used by a community of organizations which participate in its continuing evolution. This community program is sometimes called the Augmented Knowledge Workshop. Members participate through an organized user group, through systematic exchange of technology, through sponsorship of development work at SRI's Augmentation Research Center, and through their own development work. All members share benefits and ARC sets standards to maintain compatibility. Document production is one important application of the ideas being developed in this community. Other applications include teleconferencing and personal file management. A key feature of the AKW is that users primarily interested in one application, such as Document System, can readily extend their use to complementary areas of computer support whenever they wish.



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